

**Project Lead The Way (PLTW)** is the nation's leading STEM program. PLTW's world-class, activity-, project-, and problem-based curriculum and high-quality teacher professional development model, combined with an engaged network of educators and corporate partners, help students develop the skills needed to succeed in our global economy.

For information regarding earning college credit, refer to the PLTW description in the beginning of the Auburn High School Course Guide.

## Biomedical Sciences Program (BMS)

PLTW's BMS program is a rigorous and relevant four-course sequence that allows students to play the roles of biomedical professionals as they investigate and study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students engage in activities like investigating the death of a fictional person or dissecting a sheep's heart, learning content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future.

PLTW Science courses must be taken in the following sequence:

Foundation Courses      1<sup>st</sup> offering: 2015 – 2016 school year

**PBS**

### Principles of the Biomedical Sciences

In the introductory course of the BMS program, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

**HBS**

### Human Body Systems      1<sup>st</sup> offering: 2016 - 2017 school year

Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

**MI**

### Medical Interventions      1<sup>st</sup> offering: 2017 - 2018 school year

Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; conquer cancer; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Capstone Course

**BI**

### Biomedical Innovation      1<sup>st</sup> offering: 2018 – 2019 school year

In the final course of the Biomedical Sciences sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent design project with a mentor or advisor from a university, medical facility, or research institution.